

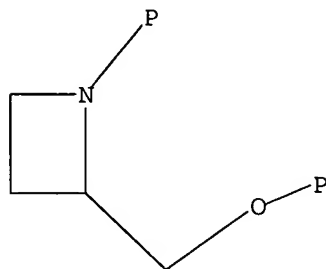
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L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full

FULL SEARCH INITIATED 13:23:39 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 28 TO ITERATE

100.0% PROCESSED 28 ITERATIONS

5 ANSWERS

SEARCH TIME: 00.00.01

L2 5 SEA SSS FUL L1

=> d l2 1-5

L2 ANSWER 1 OF 5 REGISTRY COPYRIGHT 2005 ACS on STN

RN 459426-43-8 REGISTRY

CN Phosphinous acid, diphenyl-, [(2S)-1-(diphenylphosphino)-2-azetidinyldiphenylmethyl ester (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C40 H35 N O P2

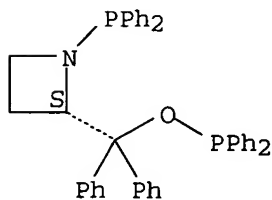
SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

DT.CA Caplus document type: Patent

RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

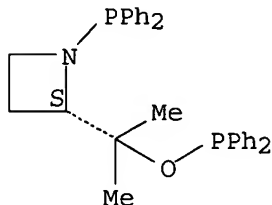
1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 5 REGISTRY COPYRIGHT 2005 ACS on STN

RN 459426-40-5 REGISTRY
 CN Phosphinous acid, diphenyl-, 1-[(2S)-1-(diphenylphosphino)-2-azetidiny]-1-methylethyl ester (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C30 H31 N O P2
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
 DT.CA Caplus document type: Patent
 RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.

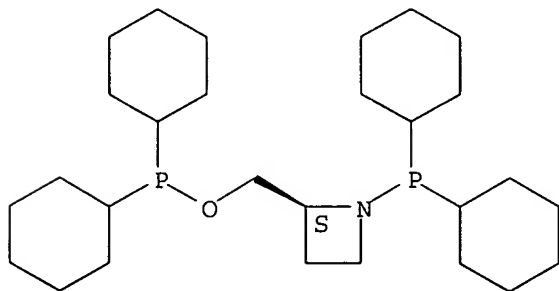


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 5 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 321744-12-1 REGISTRY
 CN Phosphinous acid, dicyclohexyl-, [(2S)-1-(dicyclohexylphosphino)-2-azetidiny]methyl ester (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C28 H51 N O P2
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT
 DT.CA Caplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.



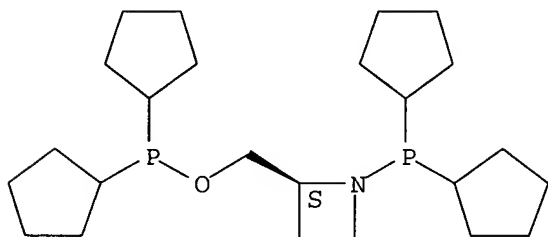
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 4 OF 5 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 216592-67-5 REGISTRY
 CN Phosphinous acid, dicyclopentyl-, [(2S)-1-(dicyclopentylphosphino)-2-azetidiny]methyl ester (9CI) (CA INDEX NAME)

FS STEREOSEARCH
 MF C24 H43 N O P2
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT
 DT.CA Caplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.

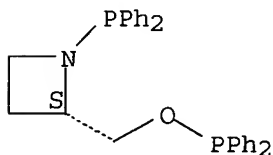


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 5 OF 5 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 216592-61-9 REGISTRY
 CN Phosphinous acid, diphenyl-, [(2S)-1-(diphenylphosphino)-2-azetidiny]methyl ester (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C28 H27 N O P2
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT
 DT.CA Caplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
170.53	170.74

FULL ESTIMATED COST

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FILE LAST UPDATED: 13 Mar 2005 (20050313/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L3 4 L2

=> d l3 1-4 ibib abs hitstr

L3 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1037091 CAPLUS

DOCUMENT NUMBER: 142:23180

TITLE: Process for producing optically active
N-monoalkyl-3-hydroxy-3-arylpropylamine compound and
intermediate

INVENTOR(S): Iwakura, Kazunori; Higashii, Takayuki; Bando, Seiji

PATENT ASSIGNEE(S): Sumitomo Seika Chemicals Co. Ltd., Japan

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004103990	A1	20041202	WO 2004-JP6602	20040511
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

JP 2004346008 A2 20041209 JP 2003-144742 20030522

PRIORITY APPLN. INFO.: JP 2003-144742 A 20030522

OTHER SOURCE(S): CASREACT 142:23180; MARPAT 142:23180

AB There is provided a process for producing an optically active N-monoalkyl-3-oxo-3-arylpropylamine compound represented by the formula $\text{ArC}^*\text{H}(\text{OH})\text{CH}_2\text{CH}_2\text{NHR}_1$ (wherein symbol * indicates an asym. carbon atom; R₁ represents optionally substituted C1-5 alkyl; Ar represents optionally substituted aryl or heteroaryl) characterized by asym. reducing a (Z)-protected-N-monoalkyl-3-oxo-3-arylpropenylamine compound represented by the formula (Z)- $\text{ArCOCH:CHNR}_1\text{R}_2$ (wherein Ar and R₁ are same as defined above; R₂ represents an amino-protecting group) with an asym. catalyst to

give an optically active compound represented by the formula
 $\text{ArC}^*\text{H}(\text{OH})\text{CH}_2\text{CH}_2\text{NR}_1\text{R}_2$ (wherein the symbol *, Ar, R₁, and R₂ are same as defined above) and successively eliminating the protective group (R₂).
 Thus, 16.7 g (Z)-N-methyl-3-oxo-3-(2-thienyl)propenylamine was acylated by 16.4 g iso-Bu chlorocarbonate in the presence of 1.2 g 4-dimethylaminopyridine and 12.1 g Et₃N in 200 mL tert-Bu Me ether at 50° for 28 h to give 22.0 g N-methyl-N-isobutoxycarbonyl-[(Z)-3-oxo-3-(2-thienyl)propenyl]amine (I). I (33.8 mg) was stirred in 2-propanol in the presence of potassium tert-butoxide and 2.3 mg [(S)-N-phenyl-2-azetidinecarboxamide]ruthenium(p-cymene) chloride (REG 543689-61-8) at 80° for 4 h to give 84% N-methyl-N-isobutoxycarbonyl-3-hydroxy-3-(2-thienyl)propylamine which (114.8 mg) was treated with a mixture of 0.2 g 30 weight% aqueous NaOH and 5 mL 2-propanol at 30° for 24 h to give N-methyl-3-hydroxy-3-(2-thienyl)propylamine (50% ee).

IT **459426-40-5**

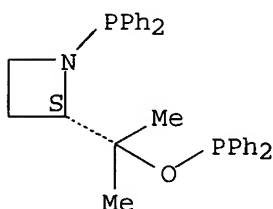
RL: CAT (Catalyst use); USES (Uses)

(preparation of optically active N-monoalkyl-3-hydroxy-3-arylpropylamine compound by asym. reduction of aminovinyl aryl or heteroaryl ketone and deprotection)

RN 459426-40-5 CAPLUS

CN Phosphinous acid, diphenyl-, 1-[(2S)-1-(diphenylphosphino)-2-azetidiny]-1-methylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:714165 CAPLUS

DOCUMENT NUMBER: 137:232770

TITLE: Preparation of transition metal complexes containing chiral phosphine ligands for use as asymmetric hydrogenation catalysts

INVENTOR(S): Hassila, Heikki; Higashii, Takayuki

PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan

SOURCE: Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1241174	A1	20020918	EP 2002-5894	20020314
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002338589	A2	20021127	JP 2002-64944	20020311
US 2003191324	A1	20031009	US 2002-97009	20020314
US 6762306	B2	20040713		
US 2004110965	A1	20040610	US 2003-724731	20031202
PRIORITY APPLN. INFO.:			JP 2001-71784	A 20010314
OTHER SOURCE(S):	MARPAT 137:232770			

Same

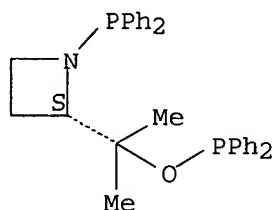
AB Chiral phosphines [e.g., (S)-N,O-bis(diphenylphosphino)- α,α -dimethyl-2-azetidine methanol, (I)] and their corresponding transition metal catalytic complexes were prepared. For example, (S)- α,α -dimethyl-2-azetidine methanol was reacted with chlorodiphenylphosphine to give %81 I, which is further reacted with [Rh(COD)₂]OTf to give the corresponding rhodium cyclooctadiene complex. In the presence of the rhodium complex, α -acetylamino-4-chlorostyrene is hydrogenated to give %90 N-acetyl-(4-chloro)- α -phenethylamine.

IT **459426-40-5P 459426-43-8P**
 RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of transition metal complexes containing chiral phosphine ligands
 for use as asym. hydrogenation catalysts)

RN 459426-40-5 CAPLUS

CN Phosphinous acid, diphenyl-, 1-[(2S)-1-(diphenylphosphino)-2-azetidiny]-1-methylethyl ester (9CI) (CA INDEX NAME)

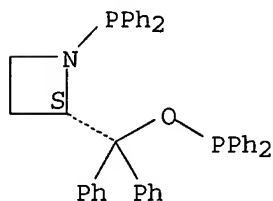
Absolute stereochemistry.



RN 459426-43-8 CAPLUS

CN Phosphinous acid, diphenyl-, [(2S)-1-(diphenylphosphino)-2-azetidiny]diphenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:820360 CAPLUS

DOCUMENT NUMBER: 134:131628

TITLE: Free and Cr(CO)₃-Complexed Aminophosphine Phosphinite Ligands for Highly Enantioselective Hydrogenation of α -Functionalized Ketones

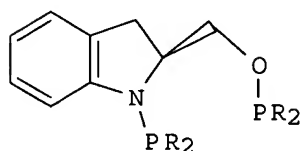
AUTHOR(S): Pasquier, Corinne; Naili, Said; Mortreux, Andre; Agbossou, Francine; Pelinski, Lydie; Brocard, Jacques; Eilers, Juergen; Reiners, Iris; Peper, Viola; Martens, Juergen

CORPORATE SOURCE: Laboratoire de Catalyse de Lille Groupe de Chimie Organique Appliquee, Ecole Nationale Supérieure de Chimie de Lille, Villeneuve d'Ascq, 59652, Fr.

SOURCE: Organometallics (2000), 19(26), 5723-5732

PUBLISHER: CODEN: ORGND7; ISSN: 0276-7333
 American Chemical Society

DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 134:131628
 GI



I

AB The synthesis and characterization of a new series of aryl- and cycloalkyl-substituted aminophosphine phosphinites, e.g. I (R = cyclopentyl), obtained from the reaction of the three precursors (S)-2-hydroxymethylazetidione, (S)-3-hydroxymethyl-1,2,3,4-tetrahydroisoquinoline, and (S)-2-hydroxymethylindoline and chlorophosphines is described. The aromatic ring in (S)-2-hydroxymethylindoline has allowed the synthesis and isolation of tricarbonyl chromium complexed amino alcs., which were similarly converted into the corresponding aminophosphine phosphinites, presenting a stereogenic center and a planar chirality. Ligand I ((S)-Cp,Cp-IndoNOP) revealed an unprecedented ³¹P NMR fluxional behavior related to a rotation inhibition around the P-heteroatom (N and O) bonds. These new AMPP ligands were used in the enantioselective hydrogenation of various α-functionalized ketones, i.e., dihydro-4,4-dimethyl-2,3-furandione 14, N-benzyl benzoylformamide 15, Et pyruvate 16, and 2-(N,N-dimethyl)aminoacetophenone hydrochloride 17. The stereoelectronic effects generated by the presence of the tricarbonyl chromium moiety onto the hydrogenations have been assessed. The beneficial effect of the matching chiralities in ligand associated with the use of the most appropriate nonchiral ligand Cl has resulted in a win of 13% of ee for the rhodium-based hydrogenation of 15. While using the most suitable new chiral AMPP ligand from this study, the four above-mentioned substrates were converted into the corresponding optically active alcs. in >99% ee (14/I), >99% ee (15/I), 87% ee (16/I), and >99% ee (17/I), resp.

IT 216592-61-9P 216592-67-5P 321744-12-1P

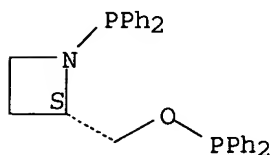
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
 USES (Uses)

(preparation of free and chromium-complexed aminophosphine phosphinite ligands for highly enantioselective hydrogenation of α-functionalized ketones)

RN 216592-61-9 CAPLUS

CN Phosphinous acid, diphenyl-, [(2S)-1-(diphenylphosphino)-2-azetidiny]methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

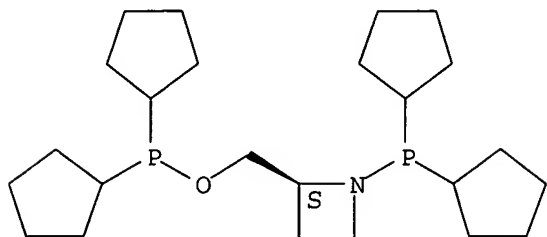


RN 216592-67-5 CAPLUS

CN Phosphinous acid, dicyclopentyl-, [(2S)-1-(dicyclopentylphosphino)-2-

azetidiny]methyl ester (9CI) (CA INDEX NAME)

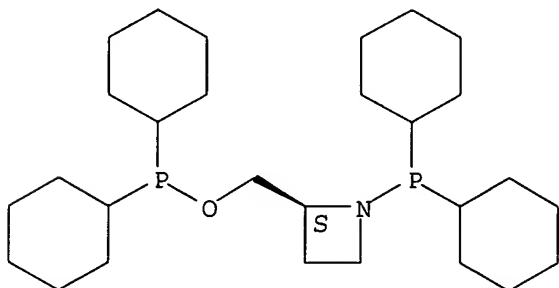
Absolute stereochemistry.



RN 321744-12-1 CAPLUS

CN Phosphinous acid, dicyclohexyl-, [(2S)-1-(dicyclohexylphosphino)-2-azetidiny]methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:682695 CAPLUS

DOCUMENT NUMBER: 130:38471

TITLE: Enantioselective hydrogenation of functionalized ketones. Synthesis and application of new chiral aminophosphine-phosphinite ligands

AUTHOR(S): Pasquier, Corinne; Eilers, Juergen; Reiners, Iris; Martens, Juergen; Mortreux, Andre; Agbossou, Francine

CORPORATE SOURCE: Laboratoire Catalyse Heterogene Homogene, Groupe Chimie Organique Appliquee ENSC Lille, Universite Sciences Technologies Lille, Villeneuve d'Ascq, F-59652, Fr.

SOURCE: Synlett (1998), (10), 1162-1164

CODEN: SYNLES; ISSN: 0936-5214

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 130:38471

AB Chiral aminophosphine-phosphinites were synthesized and applied successfully in the enantioselective hydrogenation of dihydro-4,4-dimethyl-2,3-furandione, PhCOCONHCH₂Ph, and Et pyruvate providing the corresponding hydroxy products in ≤ 97, 95, and 80% ee, resp.

IT 216592-61-9P 216592-67-5P

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);

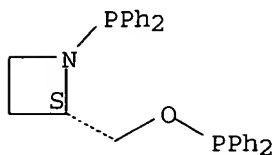
USES (Uses)

(preparation of chiral aminophosphine-phosphinite ligands and application in asym. hydrogenation of ketones)

RN 216592-61-9 CAPLUS

CN Phosphinous acid, diphenyl-, [(2S)-1-(diphenylphosphino)-2-azetidiny]methyl ester (9CI) (CA INDEX NAME)

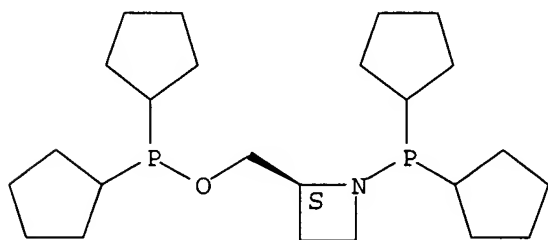
Absolute stereochemistry.



RN 216592-67-5 CAPLUS

CN Phosphinous acid, dicyclopentyl-, [(2S)-1-(dicyclopentylphosphino)-2-azetidiny]methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

31

THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT